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Michael L. Case

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EXAMINER

LUONG, ALAN H

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/670,064	CASE, MICHAEL L.	
	Examiner	Art Unit	
	ALAN LUONG	2427	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 1-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/24/2011 has been entered.

Response to Arguments

Claims 1-23, have been canceled and replaced with new claims 24-49. Therefore, only new Claims 24-49 are presented for examination.

Applicant's amendment with respect to new claims 24-49 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 48 is objected to because of the following informalities: At line 1 of claim, cited "claim 4" is mistyped of "claim 44".

3. Claims 36, 40 are objected to because of the following informalities: At line 3 of claim, cited "the first tuner", respectively is mistyped of "a first tuner".

Appropriate correction is required

4. Claim 37 is objected to because of the following:

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution.

When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 37 has been renumbered 49.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the fourth paragraph of 35 U.S.C. 112:

Subject to the [fifth paragraph of 35 U.S.C. 112], a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

Claims 25, 26 are rejected under 35 U.S.C. 112, 4th paragraph, as being of improper dependent form for failing to further limit the subject matter of the claim upon which it depends, or for failing to include all the limitations of the claim upon which it depends. In this case, at line 1 of claim 25 cited "The apparatus of claim 25"; and at line 1 of claim 26 cited "The apparatus of claim 26"; both claims 25, 26 are dependent by themselves under the improper dependent form, respectively. Applicant may cancel the claim(s), amend the claim(s) to place the claim(s) in proper dependent form, rewrite the claim(s) in independent form, or present a sufficient showing that the dependent claim(s) complies with the statutory requirements.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **24-49** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication No. **2002/0171624** by **Stecyk** et al.; In view of **Griep** (US Pat. No.7,009,528).

Regarding to claim 24: (New) Fig. 1, 2A-2F of Stecyk illustrates an apparatus (i.e. Digital Module [110]) comprising:

Fig. 5, 6 and 13 illustrate **a graphics controller** (i.e. TV control module 140, the AVCM 112 and Graphical UI 114 modules) **of an entertainment system** (i.e. HTNS) [10] **to generate commands for controlling a tuner of the entertainment system** (i.e.

Operation and control of the supported HTNS 10 through the UI 50 is seamless such that the control of a IRC VCR 33 (i.e. icon 63) and a 1394 VCR 41 (i.e. icon 66)

appears identical to the user U, displayed on Figs. 2A-2F); see ¶0048, **Figs. 2A-2F, ¶0051, ¶0053) the commands being generated in a first protocol;** (Stecyk, ¶0069, ¶0071), (i.e. controlling a tuner (the video of an IRC VCR [33] connected to the DTV 12).

Referring to Fig. 5, **a microcontroller** (i.e. DMS 116 of DM [110]) **of the entertainment system coupled to the graphics controller to receive the commands from the graphics controller; (Stecyk, ¶0071), to identify the controlled tuner to which the commands are directed,(¶0072)** (i.e. the DMS 116 maintains a device container list (DCL) 117 and a device interconnect list (DIL) 118 where the information about each device is placed into a device container object (DCO), a model number ID to identify which device model object (DMO) is associated with the device, and for the controlled tuner (i.e. external IRC devices), identify an IR code file to identify the controlled tuner to which the commands are directed) and;

to convert the commands from the first protocol to a second protocol specific to the controlled tuner; (Stecyk, ¶0067, ¶0069, ¶0072, ¶0081) (i.e. the DMS 116 receives the instruction **(the first protocol)** from graphic controller (the AVCM 112 or GUIM 114), DMS 116 formulates instructions **(converting)** or messages that are communicated to the IRC devices and TV control modules 140, and the TV micro 105 to accomplish the requested device action, the DMS 116 retrieve IRC devices information from a device container list (DCL) 117 and a device container object (DCO), including a logical device ID used to link device icons to the appropriate device DCO, a model number ID to identify which device model object (DMO) is associated with the device, and identify an IR code file, for IRC devices, as **a second protocol specific to the controlled tuner; see ¶0072, ¶0081).**

the controlled tuner (i.e. one of IRC devices [30]; i.e. as VCR [33]) **having an external control line interface** (i.e. IR blaster [135]) **coupled to the control line** (i.e. IR

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transmission cable [38]) **to receive the addressed commands (i.e. a logical device ID used to link device icons) from the microcontroller in the second protocol specific to the controlled tuner, the controlled tuner further comprising a video connection (i.e. video cable [31]) to receive modulated video signals and a video output to provide demodulated video signals based on the received modulated video signals, the external control line interface [135] being separate from the video connection;** (i.e. IR transmission cable [38] for IRC devices [30] being separate from the video connection [31]) **(Stecyk, ¶0047-¶0048, ¶0050, Fig. 4, ¶0064);**

Stecyk also teaches the microcontroller (i.e. DCM 116) being coupled to **a wired addressable control line** (i.e. IR blaster cables 38 is an electrical cable for sending out the packet containing the device specific IR code; **(Stecyk, ¶0049, ¶0085);; to send addressed control and command data (i.e. packet containing the device specific IR code), including the commands from the graphics controller to the identified tuner (the external devices 136 as DVBS tuner [32]), using an assigned address of the identified tuner (i.e. a unique device identifier (logical device ID) from DIL 117; see (Stecyk, ¶0076) through the control line [38]; (Stecyk, ¶0069, ¶0085);**

However, Stecyk is silent with **to send and receive addressed control and command data,**

In an analogous art, Fig. 1 of Griep illustrates a remote control 101 communicates with the audio system 100 in two-ways; transmitting control commands and request codes and receiving the requested status information from the source; (i.e. source TV, VCR1

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etc.. is displayed on remote control display window as shown in Fig. 2 versus request code 0x03, request from video input source); (see **Griep col. 3 line 9-col. 4 line 37, and TABLE on col. 4 lines 1-15 and Fig. 3 , col. 4 lines 38-46**) meets the limitation of claim “**send and receive control and command data**”.

According to KSR guideline C: use of a known technique to improve similar devices in the same way. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to modify **sending addressed control and command data including the commands from the graphics controller to the identified tuner** of Stecyk includes two ways communication remote control as taught by Griep to be able to send and receive control and command data in a protocol specific to the controlled tuner at the control line interface; to control and identify the input source device is connected with home entertainment system and status request to be displayed on remote control.

Regarding to claim 25: The apparatus of Claim 24, Stecyk also teaches **wherein the control line is a bus shared with multiple components** (i.e. a bi-directional 1394 bus interface), **each component having a different address for communications on the bus. (Stecyk, Fig. 1, ¶0045)**(i.e. it is well known in the art that “**each component having a different address for communications on the bus**” preferably functions as a 1394 bus cycle master, as defined in IEEE 1394-1995 8.3.1.4, a bus manager, as defined in IEEE 1394-1995 8.3.1.6, and an isochronous resource manager, as defined in IEEE 1394-1995 8.3.1.5, provides higher-level 1394 interfaces to open cable and

other AV/C devices as defined in EIA-775A, and conforms to Profile B of 775A subscriber devices),.

Regarding to claim 26: The apparatus of Claim 25, Fig. 1 of Stecyk illustrates **wherein the control line is coupled to multiple components** (i.e. external Digital 1394 devices DVD [43], A/V Disc [44], D-VCR [41] etc...)) **through a daisy-chained connection** [49]. **(Stecyk, Fig. 1, ¶0050)**

Regarding to claim 27: The apparatus of Claim 24, Griep teaches **wherein the controlled tuner** (i.e. video input source as TV or VCR1; see table **col. 4 lines 1-15**) **further generates command responses in the second protocol** (i.e. an apparatus where receives the IR messages and transmits back the requested status information back to the remote control [101] to determine the matching the message identifier with the request code of the respective status message field); **(Griep; TABLE on col. 4 lines 1-15 and Fig. 3 , col. 4 lines 38-46 and col. 5 lines 18-54). According to KSR guideline C: use of a known technique to improve similar devices in the same way.** Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to modify communication of IR blaster device of Stecyk includes two ways communication remote control of Griep for receiving **generated command responses in the second protocol from the tuner; sends the command responses addressed to the microcontroller through the external control interface** (i.e. IR transmission cable [38] through IR blaster 135) to control and identify the input source device is connected with home entertainment system and status request to be displayed on remote control.

In view of Griep; Fig. 3A of Stecyk shows **wherein the microcontroller** (i.e. DMS 116) **receives the command responses over the control line in the second protocol** (i.e. TV micro 105 and Digital Module [110] including DMS [116], receives IR event signals from an IR signal detector 103 for detecting IR event signals transmitted from a remote control device 20), **converts them to the first protocol (Stecyk, ¶0072, ¶0081); and transmits the converted command responses to the graphics controller. (Stecyk, ¶0093)** (i. e. transmits the event and the system state information to the GUIM 114 where transmits a message to the TVCM 140 to display the device selection menu 52)

Regarding to claim 28: The apparatus of Claim 24, Fig. 3C of Stecyk illustrates **wherein the controlled tuner external control line interface** (i.e. IR blaster 135) **is further coupled to other addressable components** (i.e. IR blaster controller 134) **and wherein the controlled tuner** (i.e. one of external IRC device [136]) **communicates data and control signals in the first protocol addressed to other components** (i.e. IR repeater 412) **independent of the microcontroller** (i.e. IR repeater 412 only response to the controlled tuner); **(Stecyk, ¶0061, ¶0062);** (i.e. the IR repeater 412 and IR blaster 135 may be combined as a single emitter/transmitter for communicating to external IRC device 136)

Regarding to claim 29: The apparatus of Claim 24, Griep teaches the remote control could “send and receive control and command data”. **(Griep col. 3 line 9-col. 4 line 37, and TABLE on col. 4 lines 1-15 and Fig. 3 , col. 4 lines 38-46).. According to KSR guideline C: use of a known technique to improve similar devices in the same way.** Therefore, it would have been obvious to one with ordinary skill in the art at the

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time of the invention was made to modify communication of IR blaster device of Stecyk includes sending and receiving control and command data from the controlled tuner, the combined teaching teach sends addressed data and control signals in the first protocol to the microcontroller through the external interface (i.e. IR blaster device [135])(i.e. see Fig. 5, items 135 and 136).

Regarding to claim 30: The apparatus of Claim 29, in view of Griep; Fig. 3A of Stecyk shows **wherein the microcontroller** (i.e. DMS 116] **receives the addressed data and control signals from the controlled tuner, converts the data and control signals from the second protocol to the first protocol (Stecyk, ¶0072, ¶0081);** (see the same discussion in claim 27) **and send the converted data and control signals to the graphics processor. (Stecyk, ¶0093)**

Regarding to claim 31: The apparatus of Claim 24, Fig. 5 illustrates wherein the **graphics controller** (i.e. the TV control module 140, the AVCM 112 and GUI 114 modules which has user interface [50] comprises **a system processor** (i.e. TV control module 140) **coupled to the microcontroller** (i.e. DMS [116]);

to generate the commands in the first protocol to control the tuner and to control other functions of the entertainment system. (see Stecyk, ¶0069 to ¶0071);

Regarding to claim 32: The apparatus of Claim 24, Fig. 5 of Stecyk shows wherein the microcontroller further comprises **a look-up table** for the tuner (i.e. device container list DCL 117 and device interconnector list DIL 118) and **wherein the microcontroller**

converts the commands from the graphics controller by applying the commands in the first protocol to the look-up table. (Stecyk, ¶0072, ¶0074);

Regarding to claim 33: The apparatus of Claim 24, FIGS. 7A and 7B of Stecyk shows **wherein the microcontroller** (i.e. Device Management system (DMS) [116] in DM [110] retrieve information in DCL 117 and DIL 118 to **converts the commands in the first protocol by applying instructions from the tuner-specific instruction stack** (the DCO/DMOs and DIO for the supported devices); **(Stecyk, ¶0086-¶0088);.**

Regarding to claim 34: The apparatus of Claim 24, Stecyk further teaches **a second tuner** (i.e. a digital broadcast satellite tuner (DBS) 32) **to receive modulated video signals through a video connection** (i.e. video cable [31]) **and to provide demodulated video signals, the second tuner having a second external control line interface** (i.e. IR blaster [135]) **separate from the video connection [31] to receive command data in a third protocol** (i.e. a digital input command from the remote control 20 of Fig. 4 into a device appropriate message comprising device specific IR codes) **different from the first and second protocols and specific to the second tuner at the second external control line interface;** **(Stecyk, ¶0047-¶0048, Fig. 4, ¶0064).**

Griep teaches the two-way communication remote control could “send and receive control and command data”. **(Griep col. 3 line 9-col. 4 line 37, and TABLE on col. 4 lines 1-15 and Fig. 3 , col. 4 lines 38-46). According to KSR guideline C: use of a known technique to improve similar devices in the same way.** Therefore, it would

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have been obvious to one with ordinary skill in the art at the time of the invention was made to modify a second tuner having a second external control line interface of Stecyk includes remote control sends and receives control and command data as taught by Griep in a third protocol different from the first and second protocols and specific to the second tuner at the second external control line interface.

Regarding to claim 35: A method comprising the same limitations in claim 24. In here:

Stecyk teaches generating generalized instructions in a first protocol at a graphics controller of an entertainment system to control a tuner of the entertainment system; (**Stecyk, ¶0069, ¶0071**), (see the same discussion in claim 24.)

receiving the generalized instructions in the first protocol at a microcontroller separate from the graphics controller; (**Stecyk, ¶0071**) (see the same discussion in claim 24.)

identifying the tuner to which the generalized instructions are directed; (**Stecyk, ¶0069, ¶0085**); (see the same discussion in claim 24.)

determining an address assigned to the identified tuner; (**Stecyk, ¶0076**)

determining a communications protocol for the identified tuner as a second protocol different from the first protocol; (**Stecyk, ¶0047-¶0048, Fig. 4, ¶0064**). (see the same discussion in claim 34.)

converting the generalized instructions in the first protocol to tuner control and command data in the identified second protocol; (**Stecyk, ¶0072, ¶0081**) (see the same discussion in claim 24.)

Stecyk does not teach transmitting and receiving control and command data to and from the identified tuner.

Griep teaches two ways communication remote control for transmitting and receiving control and command data to and from the identified tuner. (**Griep, col. 3 line 9-col. 4 line 37, and TABLE on col. 4 lines 1-15 and Fig. 3 , col. 4 lines 38-46**). **According to KSR guideline C: use of a known technique to improve similar devices in the same way.** Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to modify remote control operation of Stecyk includes two ways communication remote control as taught by Griep for transmitting and receiving control and command data to and from the identified tuner; to control and identify the input source device is connected with home entertainment system and status request to be displayed on remote control.

Regarding to claim 36: The method of Claim 35, in view of Griep; Stecyk teaches **receiving control and command data responses in the second protocol at the microcontroller** (i.e. DMS 116) **from the first tuner** (i.e. one of external IRC device [136]) **through the shared control line** (i.e. blaster cable [38]); (**Stecyk, Fig. 2A, Fig. 5, ¶0069**); (i.e. the UI 50 provides the user with on-screen, within the device selection menu 52, user's remote control communicate with display menu in two-way

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communication. That means Blaster 135 could send IR signal and receives response to/from external device 136)

**converting the received command responses to the first generalized protocol;
and transmitting the converted command responses to the graphics controller.**

(Stecyk, Fig. 2A, ¶0072, ¶0081, Fig. 5, ¶0093);

Regarding to claim 37: The method of Claim 35, Stecyk teaches

**receiving at the microcontroller from the graphics controller generalized
instructions in the first protocol for a second tuner** (i.e. another IRC devices [30] as the internal input devices 148 such as, for example, a digital tuner 142); **(Stecyk, ¶0069, ¶0071),**

determining an address assigned to the second tuner; (Stecyk, ¶0076);

**converting the second tuner generalized instructions to tuner control and
command data in a third communications protocol specific to the second tuner;
and transmitting the third protocol tuner control and command data through the
shared control line to the second tuner using the determined address. (Stecyk, ¶0072, ¶0081, ¶0086);** (i.e. TV control module 140 as shared control line interface)

Regarding to claim 38: The method of Claim 35, Stecyk teaches wherein converting the generalized instructions comprises applying instructions from **a tuner-specific instruction stack. (Stecyk, ¶0086-¶0088);** (see the same discussion in claim 33).

Regarding to claim 39: An article comprising a non-transitory machine-readable storage medium having stored thereon data representing instructions which, when executed by a machine, cause the machine to perform operations comprising similar limitations of claim 35, claim 39 is rejected for the same reason as discussed in claim 35.

Regarding to claim 40: The medium of Claim 39, further comprising instructions which, when executed by the machine, cause the machine to perform further operations comprising similar limitations of claim 36, claim 40 is rejected for the same reason as discussed in claim 36.

Regarding to claim 41: The medium of Claim 39, further comprising instructions which, when executed by the machine, cause the machine to perform further operations comprising similar limitations of claim 37, claim 41 is rejected for the same reason as discussed in claim 37.

Regarding to claim 42: The medium of Claim 39, wherein the instructions for converting the generalized instructions comprise instructions which, when executed by the machine, cause the machine to perform further operations comprising similar limitations of claim 32, claim 42 is rejected for the same reason as discussed in claim 32.

Regarding to claim 43: The method of Claim 39, wherein the instructions for converting the generalized instructions comprise instructions which, when executed by the machine, cause the machine to perform further operations comprising similar

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limitations of claim 33, claim 43 is rejected for the same reason as discussed in claim 33.

Regarding to claim 44: Fig. 1 of Stecyk illustrates DTV [12] as a **video tuner**

comprising the same limitations as cited in claim 24. Herein:

Fig. 5 illustrates **a system processor** (i.e. TV control Module [140]) **of an entertainment system** (i.e. HTNS [10] of Fig. 1); to **receive user commands and to generate generalized instructions in a first protocol based on the received user commands to control at least one of a first** (i.e. one of external IRC device 136)) **and a second tuner** (i.e. one of internal device IRC [148]); (Stecyk, ¶0070- ¶0071);

Referring to Fig. 5, **a microcontroller** (i.e. DMS 116) **of the entertainment system** (i.e. HTNS [10] of Fig. 1); **coupled to the graphics controller to receive the generalized instructions from the graphics controller**, (Stecyk, ¶0071),

to identify a tuner to which each generalized instruction is directed, (¶0072);

to determine an address for the identified tuner; (Stecyk, ¶0076),

to convert the received generalized instructions from the first protocol to control and command data in a protocol for the identified tuner, addressed to the respective identified tuner using the identified address through **a shared control line** (i.e. link between an IR blaster 135 and external devices 136) to **a control line** [38] **interface of the respective tuner**; (Stecyk, ¶0067, ¶0069, ¶0072, ¶0081, ¶0086) (see the same discussion in claim 24)

the first tuner (i.e. one of external device [136] or IRC [30] as DVB 32) **having a first video connection** (i.e. video cable [31]) **to receive wireless video signals modulated over a carrier frequency** (i.e. DBS signal), **the tuner** (i.e. one of external device [136]) **having a first control line interface** (i.e. IR blast cable [38]) **separate from the first video connection to receive control and command data in a second protocol specific to the tuner from the system processor [140] through a shared control line** (i.e. link between an IR blaster 135 and external devices 136) **to the microcontroller** (i.e. DMS [116]); (Stecyk, ¶0047-¶0048, Fig. 4, ¶0064),

a second tuner (i.e. another of external device [136] as VCR 33) **having a second video connection [31] to receive wireless video signals modulated over a carrier frequency** (i.e. signal from antenna 17), **the second tuner having a second control line interface** (i.e. IR blast cable [38]) **separate from the second video connection to receive control and command data in a third protocol specific to the tuner from the system processor through the shared control line to the microcontroller.** (Stecyk, ¶0047-¶0048, Fig. 4, ¶0064).

However, Stecyk is silent with “send and receive control and command data”

In an analogous art, Fig. 1 of Griep illustrates a remote control 101 communicates with the audio system 100 in two-ways; transmitting control commands and request codes and receiving the requested status information from the source; (i.e. source TV, VCR1 etc.. is displayed on remote control display window as shown in Fig. 2 versus request code 0x03, request from video input source); (see **Griep col. 3 line 9-col. 4 line 37**,

and TABLE on col. 4 lines 1-15 and Fig. 3 , col. 4 lines 38-46) meets the limitation of claim **“send and receive control and command data”**.

According to KSR guideline C: use of a known technique to improve similar devices in the same way. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to modify the first tuner having a first control line interface separate from the video connection of Stecyk includes two ways communication remote control as taught by Griep to be able to send and receive control and command data in a second protocol specific to the tuner; to control and identify the input source device is connected with home entertainment system and status request to be displayed on remote control.

As the same above discussion; **According to KSR guideline C: use of a known technique to improve similar devices in the same way.** Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to modify, the second tuner having a second control line interface separate from the video connection of Stecyk includes two ways communication remote control as taught by Griep to be able to send and receive control and command data in a third protocol specific to the tuner, to control and identify the input source device is connected with home entertainment system and status request to be displayed on remote control.

Regarding to claim 45: The video tuner of Claim 44, repeats the same limitations of claim 27; claim 45 is rejected for the same reason as discussed in claim 27.

Regarding to claim 46: The video tuner of Claim 44, combined with two ways communication of remote control as taught by Griep. Fig. 5 of Stecyk illustrates wherein the first tuner control line interface [38] further comprises an input/output interface (i.e. IR Blaster 135) to communicate data and control signals in the first protocol to external devices [136] and wherein the microcontroller [116] is coupled to the input/output interface to convert data and control signals between the first protocol and the third protocol. **(Stecyk, ¶0069 and ¶0101);**

Regarding to claim 47: The video tuner of Claim 44, repeats the same limitations of claim 32; claim 47 is rejected for the same reason as discussed in claim 32.

Regarding to claim 48: The video tuner of Claim 44, repeats the same limitations of claim 33; claim 48 is rejected for the same reason as discussed in claim 33.

Regarding to claim 49: The method of Claim 35, repeats the same limitations of claim 32; claim 49 is rejected for the same reason as discussed in claim 32.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN LUONG whose telephone number is (571)270-5091. The examiner can normally be reached on Mon.-Thurs., 9:00am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/A. L./

Examiner, Art Unit 2427

/Scott Beliveau/

Supervisory Patent Examiner, Art Unit 2427